

I. KEITH GORDON, P.E.

Principal



Fields of Expertise

Environmental and Geotechnical Engineering;
Waste Facility Siting, Design, and Permitting;
Transfer Stations and Materials Recovery Facilities;
Regulatory Compliance and Litigation Support.

Registrations Professional Engineer: AR, AZ, CA, CO, IA, ID, IL, IN, KS, MI, MN, MO, MT, NC, NE, NM, NV, OH, OK, PA, TN, TX, UT, WI, WY

Certifications

Certified Hazardous Materials Manager (CHMM)
OSHA Supervisor's Health & Safety Training
NICET Geosynthetics
National Council of Engineering Examiners

Education

BS Civil Engineering (Geotechnical)
Northwestern University, 1977

Professional Summary

Mr. Gordon serves as Project Principal and President for Gordon Environmental, Inc. He has over 26 years of engineering experience in the planning, design and execution of complex environmental projects. Many of Mr. Gordon's projects are solid, hazardous and radioactive waste management facilities, including landfills, transfer stations, and materials recovery facilities (MRFs); as well as landfill gas control/recovery systems. Successful implementation of these projects routinely involves compliance with an array of regulatory requirements. Mr. Gordon has extensive project experience with USEPA RCRA Subtitle C (Hazardous) and Subtitle D (Solid) Waste Programs; Federal (CERCLA) and State Superfund remediations; and local siting/zoning approvals. He regularly provides expert witness testimony at public hearings and in legal proceedings. Mr. Gordon was appointed to the Technical Advisory Committee providing assistance to USEPA on national solid waste facility siting issues; and was retained as editor for EPA's "Solid Waste Transfer Stations: A Manual for Decision Making".

Professional Affiliations

American Society of Civil Engineers (ASCE)
Solid Waste Association of North America (SWANA)
SWANA Certification Board, Chairman
NM Society of Professional Engineers (NMSPE)
Institute of Hazardous Materials Management (IHMM)
National Society of Professional Engineers (NSPE)
National Solid Waste Mgmt. Assoc. (NSWMA) Bd. Of Gov.

Select Project Experience

New regulations resulted in the development of regional solid waste management strategies throughout NM. Mr. Gordon served as Project Manager and Engineer-of-Record for:

- Site confirmation and permitting for the six largest new regional landfills.
- The design and construction quality assurance for twelve new regional landfills.
- The closure of several landfills that could not be upgraded.
- The development of six new transfer station/MRFs, including the largest transfer station in the state.

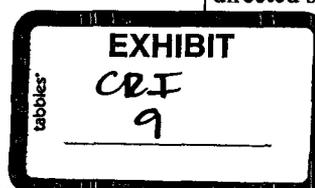
The Camino Real Landfill is a full-service 3500 tons/day land disposal facility serving El Paso and south central New Mexico. Mr. Gordon supervised the redesign of the facility in order to comply with new state and federal landfill standards. Permits were issued following Mr. Gordon's testimony as principal engineer for the Applicant at public hearings. Subsequent tasks have involved permit renewal, certification of constructed liner segments, and the permitting and installation of a LFG collection and control system. In 1997, Mr. Gordon and the Camino Real Landfill were awarded SWANA's Gold Medal for Landfill Excellence.

DOE's Waste Isolation Pilot Plant (WIPP) in Carlsbad, NM disposes of containerized "mixed waste" in a salt tunnel 2150' below ground surface. Mixed waste is classified as containing both hazardous (RCRA Subtitle C) and radioactive waste. WIPP manages defense program legacy residuals that meet this description. Mr. Gordon is the senior review and lead technical expert for:

- NMED (RCRA) and USEPA permitting of the Panel Closure System design.
- Masterplanning and engineered isolation of mined salt.
- Design of Salt Infiltration Controls; 45 acres of geosynthetic containment.
- RCRA permitting for the new "RH" (remotely-handled) transuranic waste stream, so classified because of its higher surface radioactivity.

The Circuit Court had determined that DuPage County, IL was not authorized to operate two existing landfills on Forest Preserve property. Mr. Gordon was retained as principal consultant and expert witness to evaluate the economic and environmental impact on the County should the two facilities be closed immediately. The case was favorably resolved such that the facilities were allowed to continue operations.

Mr. Gordon is responsible for air quality compliance at eight regional landfills, including Title V, New Source Review, NSPS, etc. He has designed landfill gas (LFG) control recovery systems at over 25 sites in 12 states, and has directed several LFG-to-energy projects.



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Mr. Gordon served as principle investigator and expert witness for potentially responsible parties (PRPs) in CERCLA litigation for the Oswald-Dorney Landfill in Allentown, Pennsylvania. He was responsible for waste allocation formulae, and assessing the impacts of MSW co-disposal with industrial waste. Mr. Gordon performed similar services for eight other sites in NJ, PA, OH, NY, TX, and WI.

Select Project Experience

He has managed several projects for Venezuela's oil and petrochemical industries. Examples include: secure hazardous waste disposal facility design with geosynthetic envelope; land application of refinery by-products; and gypsum waste management systems.

Dofia Ana County, New Mexico planned to implement a regional integrated waste management strategy. Mr. Gordon supervised the design, groundwater modeling, and liner CQA for the new Corralitos Regional Landfill. He was also responsible for the design, permitting, and public hearing for the 750 TPD South Central Solid Waste Transfer Station and Recycling Facility. Waste destined for the Corralitos Landfill will be routed through the new facility for materials recovery, waste screening, and processing. The largest transfer operation in NM won SWANA's bronze medal in 1998.

Lea County, New Mexico (Hobbs) was facing the closure of all MSW disposal sites in the County. Mr. Gordon directed the site characterization and design for the new greenfield regional landfill. The Lea County Landfill has a projected lifespan of over 75 years, and was developed from concept to opening, under budget, in less than two years. Mr. Gordon was responsible for design, permitting, CQA, and construction management of the \$2.6 million dollar infrastructure. GEI was then retained by the County to plan four new satellite transfer facilities.

Waste Control Specialist (WCS) operates a hazardous waste processing and disposal facility in Andrews County, Texas.

Mr. Gordon has served as Project Manager for:

- License Application for Texas Low-Level Radioactive Waste Compact site.
- Proposal to the United States Enrichment Corporation to site the \$2 billion AVLIS nuclear enrichment plant.
- CQA for double composite (RCRA Subtitle C) liners and leachate collection system.
- Engineering support with regard to design, operations waste processing, regulatory compliance, etc.

Mr. Gordon routinely provides construction quality assurance for soil/geosynthetic liner systems for solid and hazardous waste disposal facilities. He has certified over 50 lined cells in 8 states comprising 750 acres.

Publications/Presentations

- As Project Director and Principal Author, Mr. Gordon was responsible for a two-volume publication (360 pages) commissioned by the University of Illinois, "Municipal Solid Waste Landfills".
- He is the Technical Editor for USEPA's "Solid Waste Transfer Stations: A Manual for Decision Making" (EPA 530-D-01-001) commissioned by the National Environmental Justice Advisory Council (NEJAC).
- Mr. Gordon served as Project Director and Principal Author for "Solid Waste Transfer in Illinois: A Citizen's Handbook for Planning, Siting, and Technology" (1998). This 60-page document was commissioned by the DuPage County Solid Waste Department as a public education document.
- As Project Manager, he supervised the preparation of the solid waste Transfer Station Design Guide for Waste Management of North America.
- Mr. Gordon is Editor-in-Chief of SWANA's Transfer Station Management Certification Course.
- Mr. Gordon is a senior trainer at SWANA's National and Regional Symposia.

Mr. Gordon has appeared as a guest lecturer and technical trainer for a variety of technical symposia, regulatory information programs, and community forums:

- Landfill Design & Operations & LFG Control/Recovery
 - Illinois Municipal League
 - Illinois DENR
 - NM Environment Dept.
 - Illinois EPA
 - Gas Research Institute
 - SWANA
 - NSWMA
 - Minnesota PCA
 - Michigan DNR
 - Iowa DENR
- Transfer Station and Material Recovery Facilities
 - NM Environment Dept.
 - IL Recycl. Assoc.
 - Waste Equip/Recycl. Expo
 - SWANA
 - US Conf. of Mayors
 - USEPA
 - Iowa DNR
 - Eng. Soc. Detroit
 - Chicago Dept. of Env.
 - CA Indian M.C.

Awards

- SWANA Gold Medal-Landfill Excellence 1986: Miller Road Landfill, Saginaw, MI.
- SWANA Gold Medal-Landfill Excellence 1997: Camino Real Landfill, Sunland Park, NM (El Paso).
- SWANA Bronze Medal-Transfer Station Excellence 1998: South Central Transfer/MRF, Las Cruces, NM.
- SWANA Silver Medal-Landfill Excellence 2000: Cerro Colorado Landfill, Albuquerque, NM.